## RECLAMATION Managing Water in the West

MT DROUGHT ADVISORY COMMITTEE MEETING

RESERVOIR AND RIVER OPERATIONS

**September 21, 2006** 



U.S. Department of the Interior Bureau of Reclamation.

# RECLAMATION Managing Water in the West U.S. Department of the Interior Bureau of Reclamation

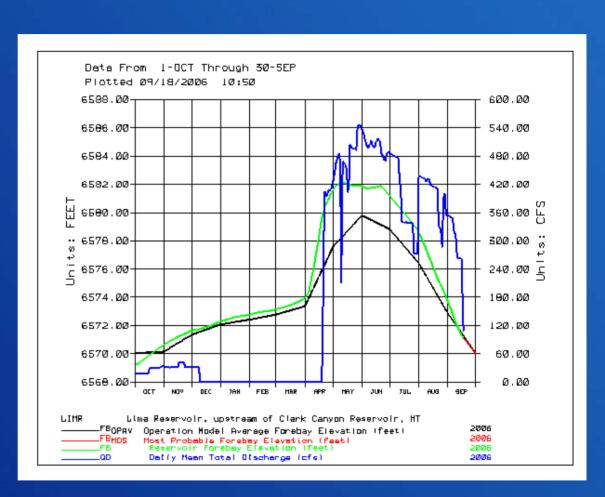
#### Lima Reservoir

Inflows are well below average
Storage @ 99% of average
Reservoir's decline is slowing

as irrigation demands decrease

All irrigators received a full water supply in 2006

Outlook is good and year-end storage will be about normal



#### Hebgen Reservoir

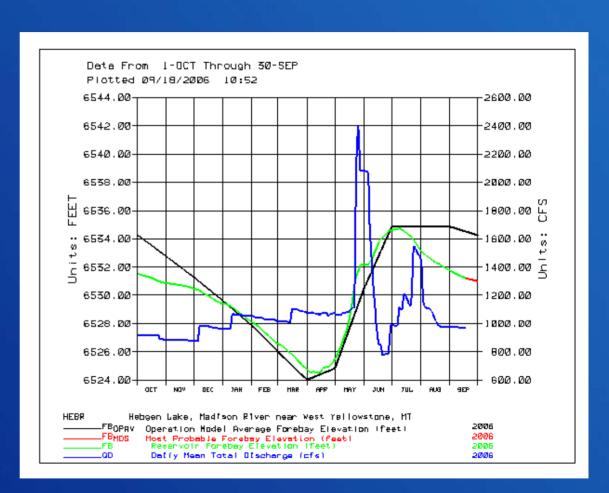
Inflows are well below average

Storage @ 89% of average and about 0.7 foot lower than last year

**Currently releasing 970 cfs to the Madison River** 

Pulse flows were implemented to control river temperatures in the Madison River downstream of Ennis Lake

Water supply outlook is favorable but storage is lower than desired



#### Clark Canyon Reservoir

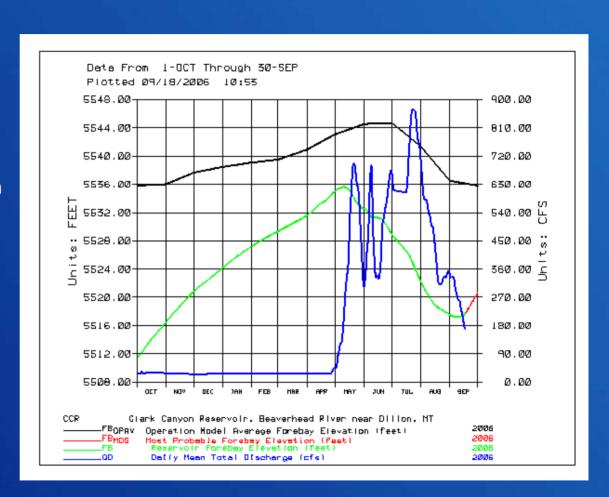
Inflows are below average

Storage @ 59,957 af (48% of average and 8.5 ft or 20,500 af higher than last year)

Carry-over storage will be much better than it recent years

As irrigation demands decline, releases are being reduced to a desired planned winter release of near 50 cfs

All water users experienced a full water supply in 2006



#### **Canyon Ferry Reservoir**

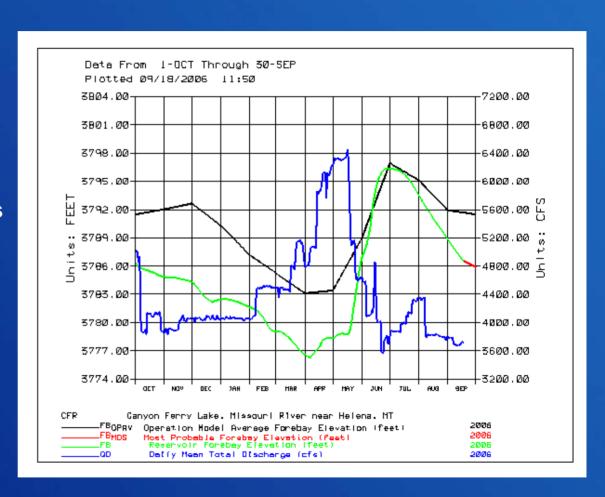
Inflows are well below average

Storage @ 90% of average and 1.3 ft lower than last year

Releases being maintained at rates to maintain river flows below Holter Dam near 4,100 cfs

Fall releases may need to be decreased to 3,000-3,500 cfs to conserve storage for next year

Water supply outlook has diminished but recent rains have moderately improved things



#### Gibson Reservoir

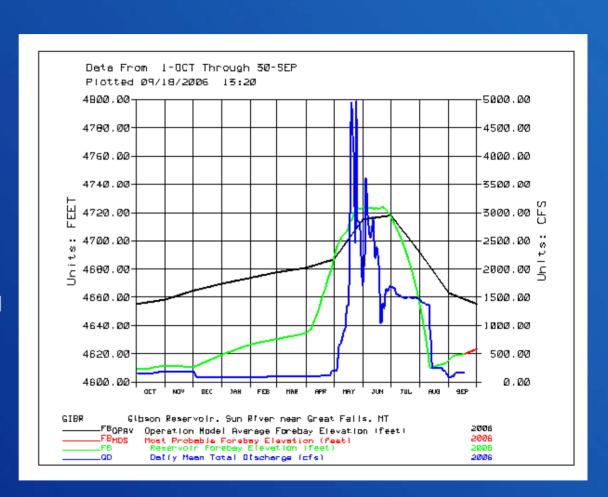
Inflows are well below average

Storage is 30% of average and 10.6 feet higher that last year

With the irrigation season essentially over and storage fully depleted, releases to the Sun River are being maintained at 120 cfs allowing storage to slowly refill

Diversions will continue this fall to slowly refill Willow Creek & Pishkun Reservoirs

Due to lack of spring & summer precipitation, some of the Sun River water users experienced water shortages this past year



#### Lake Elwell (Tiber Reservoir)

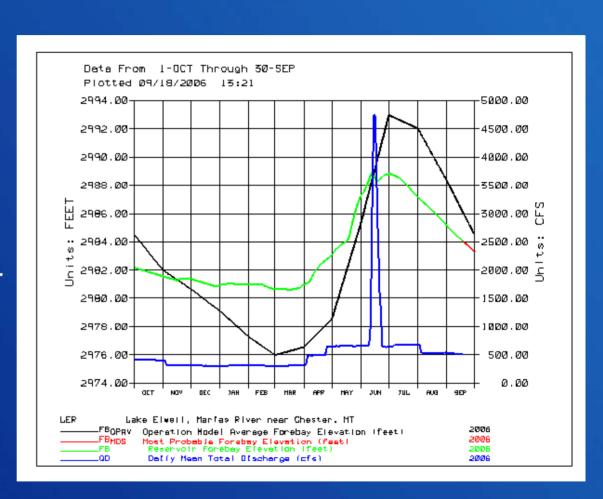
Inflows are well below average

Storage @ 96% of average and 1.4 ft higher than last year

Currently releasing 510 cfs to the Marias River and plan to maintain this rate through the fall and winter

Plan to evacuate storage to near the normal level by next spring

Water supply outlook is favorable for the remainder of the year



#### Lake Sherburne

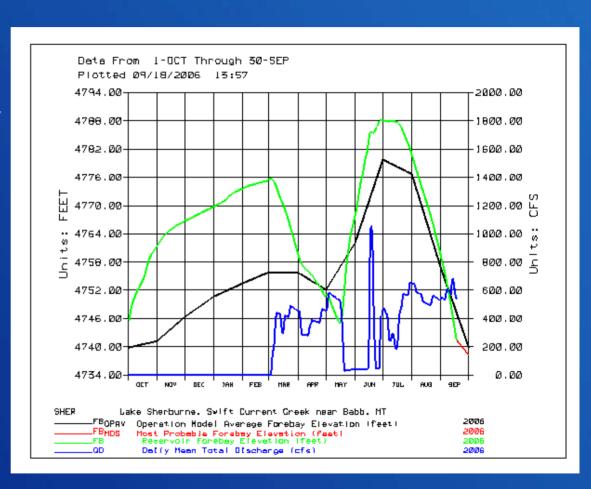
Inflows are well below average

Storage @ 67 percent of average and 2.3 feet higher than last year

Releases from Lake Sherburne are 525 cfs and we are currently diverting 410 cfs from St. Mary River Basin to Milk River Basin

All Milk River water users received a full water supply in 2006

Carry-over storage for the Milk River Project looks favorable for water year 2007



#### Fresno Reservoir

With diversions from the St. Mary Basin, inflows to Fresno are near average

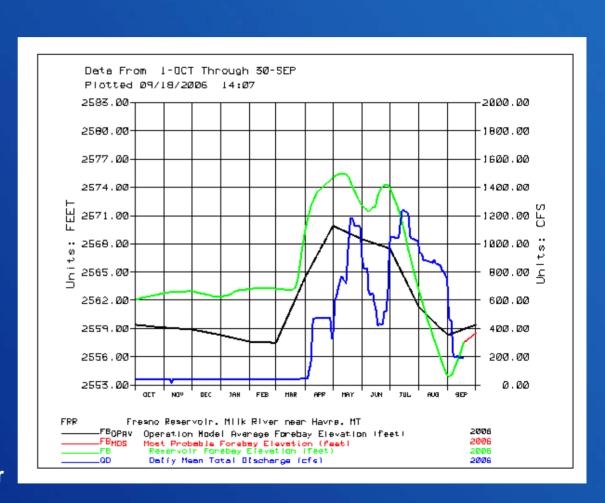
**Currently diverting 410 cfs from St. Mary Basin to Milk River** 

Storage @ 92% of average and 3.8 ft or 8,900 af lower than last year

Releases have been reduced and are being maintained at 105 cfs to meet irrigation demands

All Milk River water users received full water supply in 2006

Carry-over storage for the Milk River Project looks favorable for water year 2007



#### Bighorn Lake (Yellowtail Reservoir)

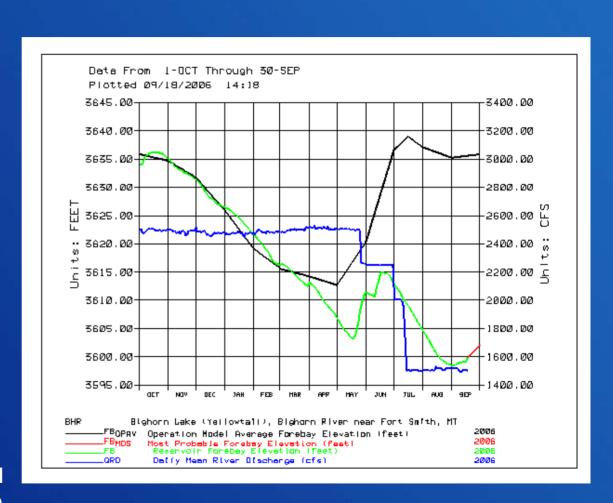
Inflows are well below average

With irrigation demands slowly declining and inflows steadily increasing, storage is now beginning to slowly increase

Storage is @ 73% of average and 33.3 feet lower than last year and 40 feet below full pool

Releases have been reduced and are being maintained at 1,500 cfs, 1,000 cfs below the minimum desired flow of 2,500 cfs required for downstream fishery

Water supply looks grim, but with strict conservative operations, Bighorn Lake is still expected to reach the top of the joint-use pool in 2007

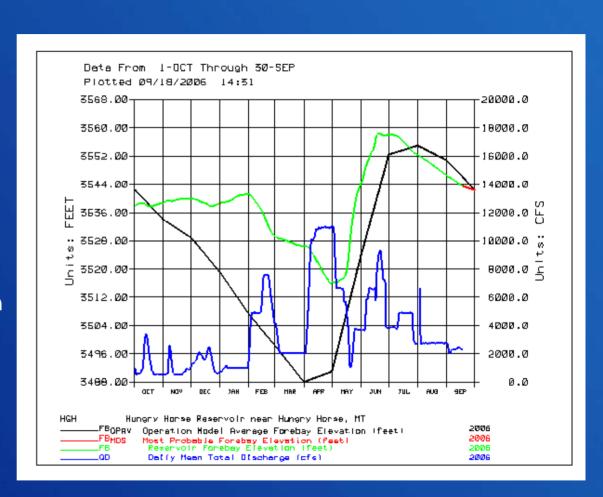


#### **Hungry Horse Reservoir**

Inflows are below average
Storage @ 98% of average
Currently releasing 2,300 cfs to river

Hungry Horse was successful in filling and reaching the top of the conservative pool in 2006

2006 operations closely resemble 2005 operations.



### BUREAU OF RECLAMATION MONTANA AREA OFFICE RESERVOIR OPERATIONS REPORT 17-Sep-2006 ALL CONTENTS IN ACRE-FEET

				RESERVOIR CONDITIONS							WATER SUPPLY OUTLOOK						
				ELEVATION CAPACITY						MTN. SNOW WATER CONTENT				SEPTEMBER RUNOFF			
				(FEI	ET)	(ACRE-FEET)		2006			(INCHES)				SEPTEMBER 1st FORECAST		
	NORMAL	TOTAL	AVERAGE					%	% OF	% OF				% OF			% OF
RESERVOIR NAME	FULL POOL	CAPACITY	CAPACITY	2005	2006	2005	2006	FULL	AVG	Last Yr	2005	2006	AVG	AVG	(KAF)	AVG	AVG
CLARK CANYON	5546.10	174,368	125,962	5509.25	5517.74	39,495	59,957	34	48	152	0.00	0.00	0.01	0	N.A.	N.A.	N.A.
CANYON FERRY	3797.00	1,891,888	1,717,608	3787.87	3786.55	1,596,005	1,554,644	82	91	97	0.00	0.00	0.05	0	N.A.	N.A.	N.A.
GIBSON	4724.00	96,477	30,198	4609.37	4619.98	5,125	9,005	9	30	176	0.00	0.00	0.02	0	N.A.	N.A.	N.A.
PISHKUN	4370.00	46,670	33,828	4361.33	4342.20	34,550	16,153	35	48	47	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
WILLOW CREEK	4142.00	32,300	17,916	4131.15	4133.87	18,057	20,724	64	116	115	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
LAKE ELWELL	2993.00	967,319	809,078	2982.71	2984.06	796,971	777,862	80	96	98	0.00	0.00	0.09	0	N.A.	N.A.	N.A.
SHERBURNE	4788.00	67,854	14,325	4739.14	4741.44	9,667	9,582	14	67	99	0.00	0.00	0.07	0	N.A.	N.A.	N.A.
FRESNO	2575.00	92,880	38,777	2561.34	2557.50	44,490	35,618	38	92	80	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
NELSON	2221.60	78,951	55,606	2215.50	2212.33	55,025	44,592	56	80	81	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
BIGHORN LAKE	3640.00	1,070,029	1,017,609	3633.21	3599.84	991,801	743,701	70	73	75	0.00	0.00	0.15	0	N.A.	N.A.	N.A.

		Inf	low	Change Fror	Feet							
RESERVOIR NAME		Current	% of Avg	Elevation	Capacity	to Fill						
CLARK CANYON		351	106	8.49	20,462	28.36						
CANYON FERRY		1,830	55	-1.32	-41,361	10.45						
GIBSON		202	65	10.61	3,880	104.02						
PISHKUN		0	N.A.	-19.13	-18,397	27.80						
WILLOW CREEK		76	N.A.	2.72	2,667	8.13						
LAKE ELWELL		66	29	1.35	-19,109	8.94						
SHERBURNE		93	98	2.30	-85	46.56						
FRESNO		529	146	-3.84	-8,872	17.50						
NELSON		285	N.A.	-3.17	-10,433	9.27						
BIGHORN LAKE		2,920	105	-33.37	-248,100	40.16						

#### Summary of Reclamation Project Operations

2006 inflows to all Reclamation reservoirs have been well below normal.

Normal precipitation has not occurred during June, July, August, and early September.

Reservoir storages vary from 30% of average @ Gibson to 116% of average at Willow Creek

Most Reclamation water users received full water supplies this year with minor shortages experienced on the Sun River Project

Areas of most concern continues to be the Beaverhead, Sun River and Bighorn River Basins

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## Thankyou & Haveanice Day!



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